

Flight Scientist Report
Tuesday 02/15/2022 ACTIVATE RF121

Flight Type: Statistical Survey Flight
Flight Route: KLF1-ECG-OXANA-32N70W-OXANA-ECG-KLF1
Special Notes: Second of 2 flights today.

King Air

Pilot report (Wusk):

Second flight of a planned two flight day. Cooperative flight with the HU25. KLF1-ECG-OXANA-32N70W-OXANA-ECG-KLF1. HU with over-gross fueling. Aiming for 1315 (too provide sunset buffer due to long flight) take-off was overly optimistic, especially with the winds making the morning flight longer. Taxied out but HU25 was airborne ahead of an Air Force surge that delayed out takeoff substantially. By the time the UC was airborne there was already a significant separation between aircraft. The UC12 eventually caught up and was ahead of the HU approaching the Turn Point. Due to the strong westerly winds the UC needed to turn about 10nm early. Even with the early turn the UC soon fell behind the HU on the westbound leg. The HU was landing about the time the UC was over head ECG. UC completed a visual appr to Rwy 08. Aircraft good for a planned two flight day tomorrow.

Flight scientist report (Shingler):

KLF1 KECG OXANA 34N070W OXANA KECG KLF1

UC12 took off approximately 15 min in trail of the HU25 due to a fighter squadron launch. UC12 was vectored to the west initially causing another slight delay. Once on track and above FL180, there was reasonable boundary layer scattering of with aprx ASR of 1 and no clouds. Transitioned to scattered shallow cu 1/3 between OBX and OXANA. Stratiform deck formed approx half way from OXANA to 34N70W. Light cirrus overhead near 34N70W. Coincidence was restored in latter half of leg between OXANA and turnpoint. UC12 6 min ahead of the HU25 after making the turn at the far end. 150 kts ground speed on return (vs 205 kts for HU25). Back near OBX the boundary layer dropped and held at a depth of about 1500 ft.

Dropped 3 sondes on track:

OXANA

TURN

½ TURN/OXANA

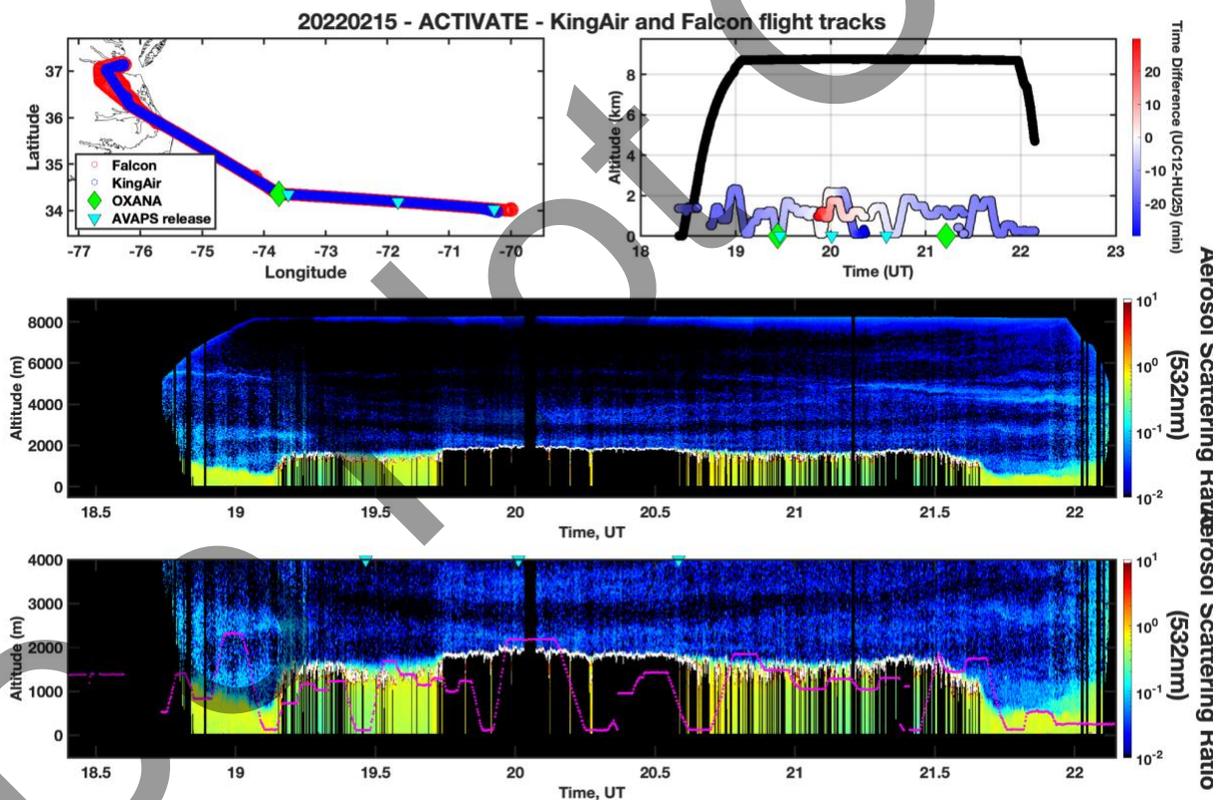
Falcon

Pilot report (Slover):

Flown as planned from KLFI ECG OXANA 34N070W OXANA ECG KLFI. Good statistical survey day with clouds from 3000' to 6000' MSL. Aircraft were not fully within coincident tolerances due to an early takeoff from HU-25 and a late takeoff due to fighter activity taking priority over the B-200. A 360-turn was made on return from OXANA to kill some time, but HU-25 was an average of 10-20 min in front of B-200. This sortie was an over gross weight authorized sortie.

Flight scientist report (Crosbie):

Stat survey OXANA-East. Similar conditions to the morning. Clouds were scattered/broken Cu to OXANA, then there was a hole followed by a rapid transition to an overcast region where small Cu were feeding an upper stratiform layer. In the thicker regions, there was some indication of ice, but generally the clouds comprised small droplets.



Do Not Cite!

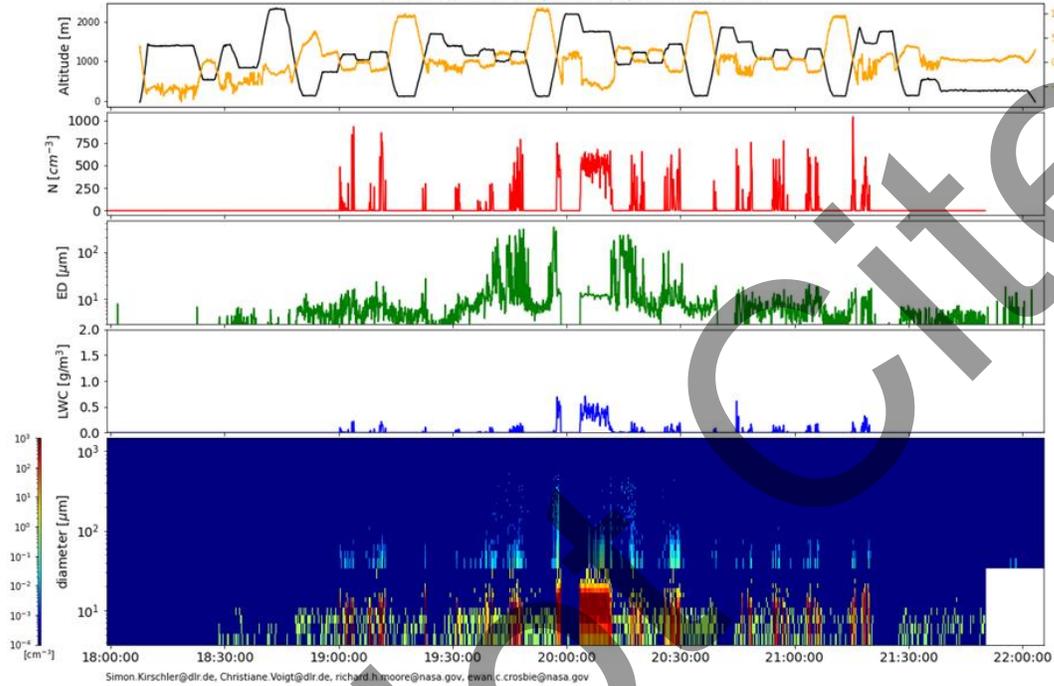
Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



Cloud Probes (FCDP & 2DS) Quicklook 15/02/2022 17:58:52-22:05:38

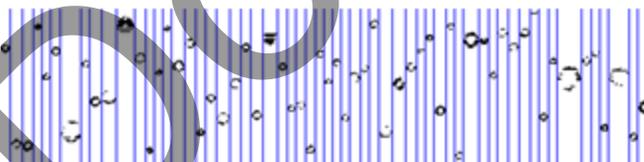
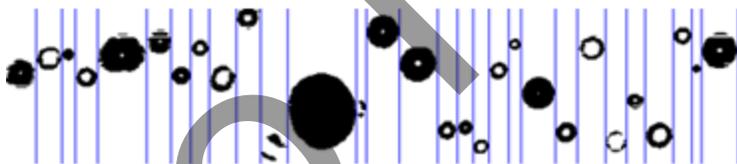
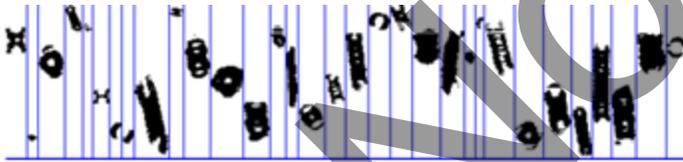
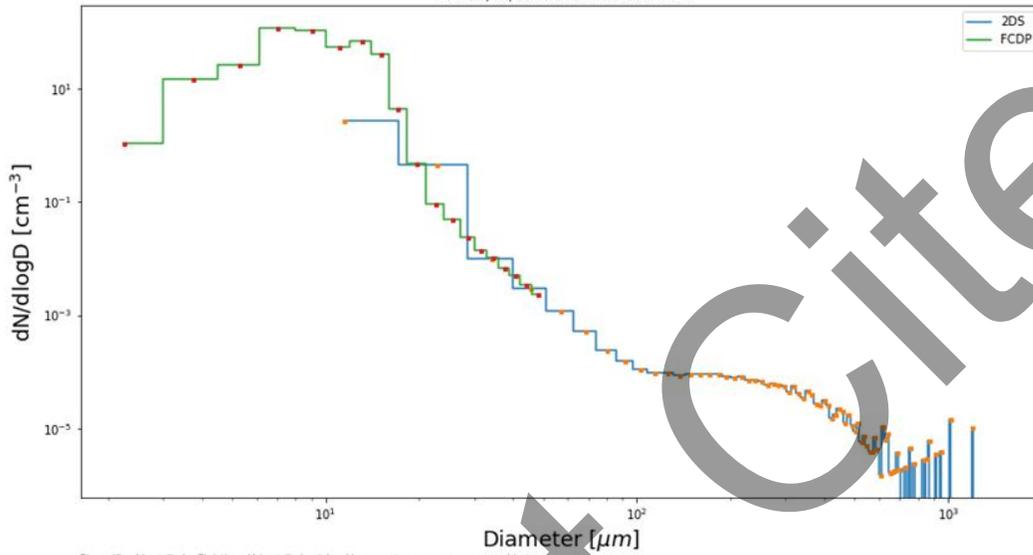


PSD ACTIVATE

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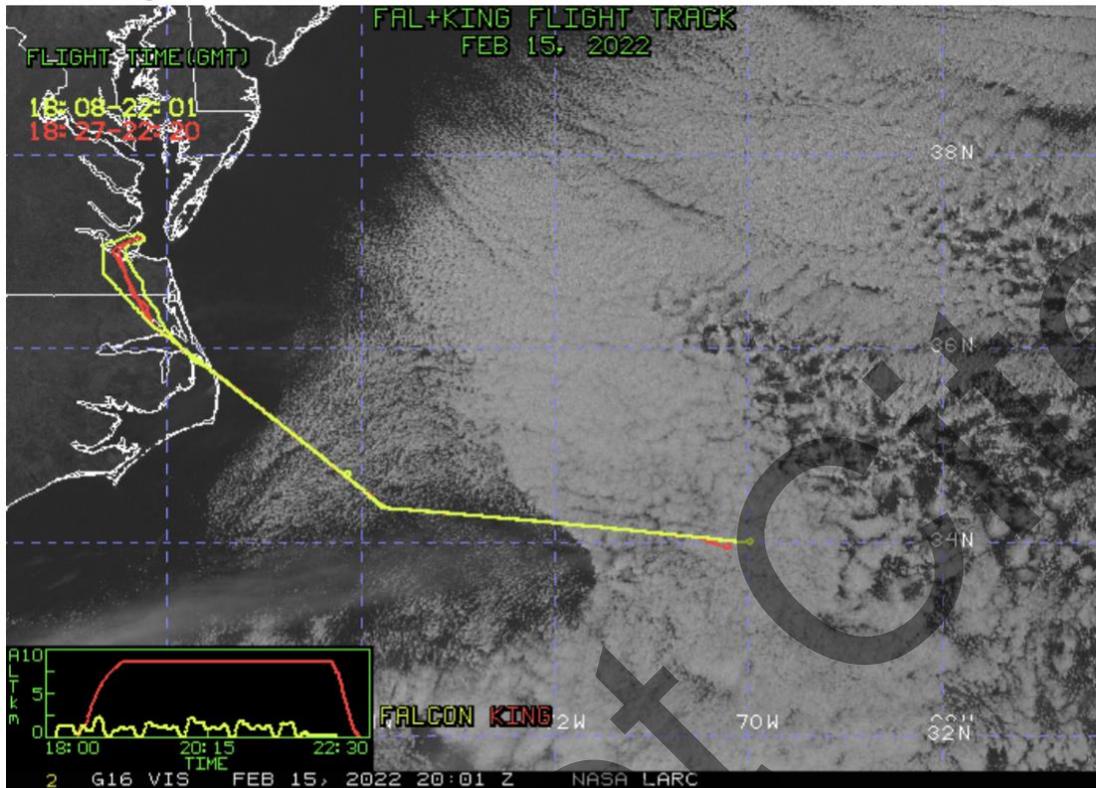


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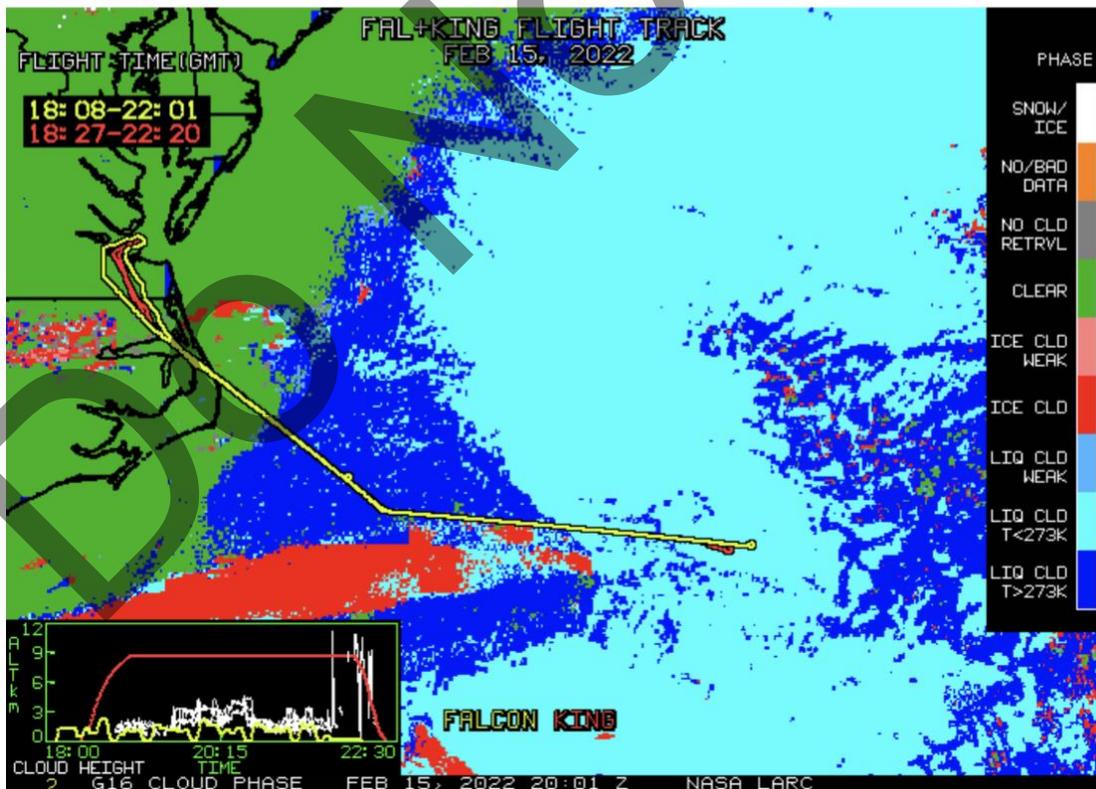


Mixed phase clouds with ice and liquid
Precip.

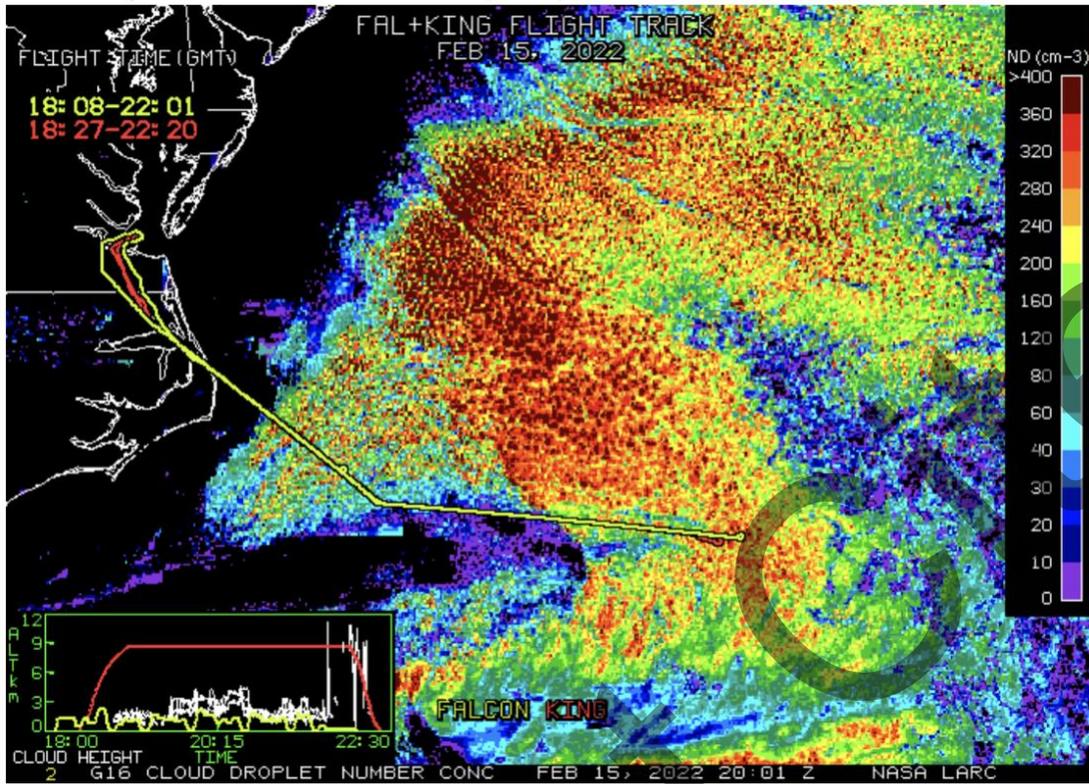
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 121, 20:01 UTC Feb 15, 2022
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

